

U.S. PATENT & TRADEMARK OFFICE  
APR 9 4 2005

PTO/SB/30 (08-03)

Approved for use through 07/31/2006.  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

# Request For Continued Examination (RCE) Transmittal

Address to:  
Mail Stop RCE  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Application Number	09/981,386
Filing Date	October 16, 2001
First Named Inventor	J. Thomas O'Brien
Art Unit	2643
Examiner Name	Dionne Harvey
Attorney Docket Number	I-2-0186.1US

**This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.**  
Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. See Instruction Sheet for RCEs (not to be submitted to the USPTO) on page 2.

1. **Submission required under 37 CFR 1.114** Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

- a. ☐ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.
- i. ☐ Consider the arguments in the Appeal Brief or Rely Brief previously filed on \_\_\_\_\_
- ii. ☐ Other \_\_\_\_\_
- b. ☒ Enclosed
- i. ☒ Amendment/Reply
- iii. ☐ Information Disclosure Statement (IDS)
- ii. ☐ Affidavit(s)/ Declaration(s)
- iv. ☐ Other \_\_\_\_\_

## 2. Miscellaneous

- a. ☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of \_\_\_\_\_ months. (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)
- b. ☐ Other \_\_\_\_\_

## 3. Fees

- The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.  
The Director is hereby authorized to charge the following fees, or credit any overpayments, to  
a. ☒ Deposit Account No. 09-0435 (InterDigital Communications Corporation)

i. ☒ RCE fee required under 37 CFR 1.17(e) \$ 790.00

ii. ☐ Extension of time fee (37 CFR 1.136 and 1.17) \$ \_\_\_\_\_

iii. ☐ Other \_\_\_\_\_

b. ☐ Check in the amount of \$ \_\_\_\_\_ enclosed

c. ☐ Payment by credit card (Form PTO-2038 enclosed)

04/05/2005 SFELEKE1 00000131 090435-09981386


01 FC:1806 180.00 DA

04/05/2005 SFELEKE1 00000132 09981386

01 FC:1801 790.00 DA

**WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.**

## SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

Name (Print/Type)	Richard L. Cruz	Registration No. (Attorney/Agent)	52,783
Signature		Date	April 1, 2005

## CERTIFICATE OF MAILING OR TRANSMISSION

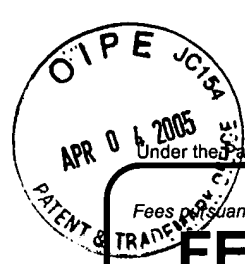
I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop RCE, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450

Name (Print/Type)	Richard L. Cruz	Date	April 1, 2005
Signature			

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

04/05/2005 SFELEKE1 00000132 090435-09981386  
For assistance in completing the form, call 1-800-PTO-9199 and select option 2.

01 FC:1801 790.00 DA



Effective on 12/08/2004.  
Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

# FEE TRANSMITTAL

## For FY 2005

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$ ) 790.00

**Complete if Known**

Application Number	09/981,386
Filing Date	October 16, 2001
First Named Inventor	J. Thomas O'Brien
Examiner Name	Dionne Harvey
Art Unit	2643
Attorney Docket No.	I-2-0186.1US

**METHOD OF PAYMENT (check all that apply)**

☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): \_\_\_\_\_  
☒ Deposit Account Deposit Account Number: 09-0435 Deposit Account Name: InterDigital Communications Corporation

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☒ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, except for the filing fee  
☒ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 ☒ Credit any overpayments

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

**FEE CALCULATION****1. BASIC FILING, SEARCH, AND EXAMINATION FEES**

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

**2. EXCESS CLAIM FEES**

Fee Description	Fee (\$)	Small Entity Fee (\$)
Each claim over 20 or, for Reissues, each claim over 20 and more than in the original patent	50	25
Each independent claim over 3 or, for Reissues, each independent claim more than in the original patent	200	100
Multiple dependent claims	360	180

<u>Total Claims</u>	<u>Extra Claims</u>	<u>Fee (\$)</u>	<u>Fee Paid (\$)</u>	<u>Multiple Dependent Claims</u>	<u>Fee (\$)</u>	<u>Fee Paid (\$)</u>
5 - 20	= 0	x 50.00	= 0.00			
					0.00	

HP = highest number of total claims paid for, if greater than 20

<u>Indep. Claims</u>	<u>Extra Claims</u>	<u>Fee (\$)</u>	<u>Fee Paid (\$)</u>
1 - 3	= 0	x 200.00	= 0.00

HP = highest number of independent claims paid for, if greater than 3

**3. APPLICATION SIZE FEE**

If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

<u>Total Sheets</u>	<u>Extra Sheets</u>	<u>Number of each additional 50 or fraction thereof</u>	<u>Fee (\$)</u>	<u>Fee Paid (\$)</u>
- 100 =	/ 50 =	(round up to a whole number) x		0.00

**4. OTHER FEE(S)**

Non-English Specification, \$130 fee (no small entity discount)

Other: Request for Continued Examination

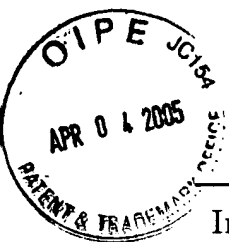
790.00

**SUBMITTED BY**

Signature		Registration No. 52,783 (Attorney/Agent)	Telephone 215-568-6400
Name (Print/Type)	Richard L. Cruz	Date April 1, 2005	

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In the **PATENT APPLICATION** of:

**J. Thomas O'Brien**

**Application No.:** 09/981,386

**Confirmation No.:** 7050

**Filed:** October 16, 2001

**For:** SUB BASE STATION AND USER  
EQUIPMENT IMPLEMENTATIONS

**Group:** 2643

**Examiner:** Dionne Harvey

**Our File:** I-2-0186.1US

**Date:** April 1, 2005

**REPLY PURSUANT TO 37 C.F.R. §1.114**

Mail Stop RCE  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

This Reply is being timely filed in response to the Final Office Action dated January 4, 2005. A Request for Continued Examination (RCE) is filed concurrently herewith.

Please amend the application without prejudice or disclaimer as follows:

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. - 16. (Canceled)

17. (Currently Amended) A wireless dual use user equipment (UE) capable of operating in a cordless and cellular environment, the dual [[user]] use user equipment comprising:

a modulation and demodulation device for modulating/demodulating data using a plurality of modulation/demodulation schemes, the plurality of modulation/demodulation schemes comprise a cordless scheme for communicating with a sub base and a cellular scheme for communicating with a base station;

a modulation and demodulation controller for switching the modulation/demodulation scheme of the modulation/demodulation device between the cordless scheme and the cellular scheme such that a transition between said cordless and cellular schemes is transparent to a user sending or receiving a communication signal from said dual use UE; the modulation and demodulation controller initiating operation in the cellular environment by sending a handoff

signal and switching to the cellular scheme; whereby a sub base in response to the sent handoff signal ceasing communications with a cellular base station.

18. - 20. (Canceled).

21. (Original) The dual use UE of claim 17 wherein the dual use UE determines it is leaving the cordless environment by measuring a received signal strength of a sub base transmission.

22. (New) The dual use UE of claim 21 wherein the modulation and demodulation controller switches to the cellular environment when said signal strength is below a predetermined threshold.

23. (New) The dual use UE of claim 17 wherein the dual use UE determines it is entering the cordless environment by detecting a sub base pilot signal.

24. (New) The dual use UE of claim 23 wherein the dual use UE, upon detecting the sub base pilot signal, sends a handoff signal to the sub base; whereby the sub base commences communicating to the cellular network and the dual use UE begins communicating with the sub base.

**Applicant:** J. Thomas O'Brien  
**Application No.:** 09/981,386

**REMARKS**

After the foregoing Amendment, Claims 17 and 21 are currently pending in this application. New claims 22-24 have been added to more distinctly claim subject matter which the Applicant regards as the invention. Applicant submits that no new matter has been introduced into the application by these amendments.

**Claim Rejections - 35 USC §103(a)**

Claims 17 and 21 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,445,921 (Bell) in view of U.S. Patent No. 6,253,088 (Wenk).

In the present invention, the wireless dual use user equipment (UE) switches between the cordless scheme and the cellular scheme. To switch from the cordless scheme to the cellular scheme, a hand off signal is sent and the subbase in response to the hand off signal ceases communications with the cellular base station. At that point, the UE can seamlessly communicate using its own modulation device with the cellular base station. Accordingly, to the user of the dual use UE and the recipient of that user's call, the transition between the cordless and cellular environment is totally transparent.

Bell, on the other hand, does not teach a seamless transition. According to Bell, after detection of a failed link, i.e., a dropped call, a switch between cordless

**Applicant:** J. Thomas O'Brien  
**Application No.:** 09/981,386

and cellular systems is initiated. This 'switch' requires a break in the communication signal and a re-call. To overcome this broken transition, the Examiner asserts the obviousness of replacing the subbase 150 of Bell with the subbase 18 of Wenk. Wenk, however, does not teach the in-call transition between cellular and cordless systems.

Rather, Wenk teaches a means for routing calls. The subbase of Wenk, sensing that the UE is within a predefined vicinity of the subbase, sends a message to the cellular network resulting in calls intended for the UE being routed to said subbase. Once the UE is no longer in the predefined vicinity, the subbase sends a 'de-registration' message to the cellular network informing the ACRE to cease forwarding calls to the subbase. As a result, any subsequent calls will be serviced through the cellular network.

Unlike the present invention, Wenk does not address the in-call transitioning of networks. Thus, if a user utilizing the system described in Wenk began a call serviced by the subbase (cordless network), and during that call moved beyond the vicinity of the subbase, such call would be dropped. Accordingly, it is respectfully submitted that Bell-Wenk system would not disclose the transparent environment of the present invention. In response to the Examiner's remarks, however, claim 17 was amended and claims 22-24 were added to further distinguish the claim subject matter which the Applicant regards as the invention from the cited art.

**Applicant:** J. Thomas O'Brien  
**Application No.:** 09/981,386

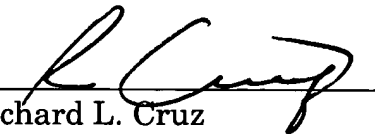
**Conclusion**

If the Examiner believes that any additional minor formal matters need to be addressed in order to place this application in condition for allowance, or that a telephone interview will help to materially advance the prosecution of this application, the Examiner is invited to contact the undersigned by telephone at the Examiner's convenience.

In view of the foregoing amendments and remarks, Applicants respectfully submit that the present application, including claims 17 and 21 - 24, is in condition for allowance and a notice to that effect is respectfully requested.

Respectfully submitted,

J. Thomas O'Brien

By   
Richard L. Cruz  
Registration No. 52,783

Volpe and Koenig, P.C.  
United Plaza, Suite 1600  
30 South 17th Street  
Philadelphia, PA 19103  
Telephone: (215) 568-6400  
Facsimile: (215) 568-6499

RLC/slp